

EDITION

20

ILLUSTRATED IN FULL COLOR

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# Taber's<sup>®</sup>

## CYCLOPEDIA

## MEDICAL

## DICTIONARY

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F. A. DAVIS COMPANY



PHILADELPHIA



al for the element cobalt.  
*genial spinal nerve.*

**zyme** (kô-âs'êr-vât) [L. coaceru-  
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This process is accelerated by high-mo-  
 lecular-weight kininogen (HMWK).  
 This leads to formation of factor XII, a  
 process that produces more HMWK to  
 accelerate kallikrein production. The  
 process continues and factors XI and IX  
 and HMWK, in concert with calcium,  
 generate factor Xa. The clotting cascade  
 then continues as in the extrinsic path-  
 way, and prothrombin is converted to  
 thrombin, which acts on fibrinogen to  
 produce fibrin. SEE: illus.

**coagulator** (kô-âg'û-lât'ôr) 1. A surgical  
 device that utilizes electrical current,  
 light energy, ultrasound, etc., to stop  
 bleeding. 2. A pharmacological sub-  
 stance used to induce hemostasis or so-  
 lidification of proteinaceous fluids.

**argon beam** c. A surgical instrument  
 used to cut or cauterize tissues, which  
 relies on a jet of argon gas to carry ener-  
 gies into the operative field.

**infrared** c. A surgical instrument  
 that focuses infrared light energy to cut  
 or damage tissues or to stop bleeding.  
 The device has been used in skin sur-  
 gery, hair transplantation, ablation of  
 abnormal cardiac conduction pathways,  
 and treatment of internal hemorrhoids,  
 among other applications.

**microwave** c. A surgical instrument  
 that focuses microwave energy through  
 an antenna to cut or cauterize tissue.  
 The device can be used in open or lapo-  
 scopic surgeries.

**coagulopathy** (kô-âg'û-lôp'â-thê) [F +  
 Gr. pathos, disease, suffering] A defect  
 in blood-clotting mechanisms. SEE: co-  
 agulation, blood.

**consumption** c. Disseminated intra-  
 vascular coagulation.

**coagulum** (kô-âg'û-lûm) pl. coagula [L.  
 A coagulated mass, clot, or precipitate.

**coalesce** (kô-â-lê-s'ê) [L. coalescere] To  
 fuse; to run or grow together.

**coalescence** (kô-â-lê-s'êns) The fusion or  
 growing together of two or more body  
 parts.

**coarctation** (kô-â-rîk'tâ-shûn) [L. coarctare,  
 to fit together] The adjustment of sepa-  
 rate parts to each other, as the edges  
 of fractures.

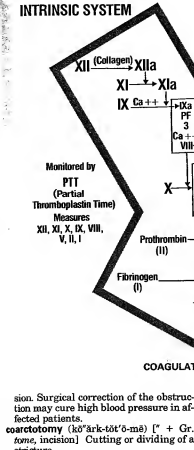
**coarctate** (kô-â-rîk'tâ) [L. coarctare,  
 to tighten] To press together; pressed to-  
 gether.

**coarctation** (kô-â-rîk'tâ-shûn) 1. Com-  
 pression of the walls of a vessel.

2. Shriveling. 3. A stricture.

**c. of the aorta** A localized congenital  
 malformation resulting in narrowing of  
 the aorta, often resulting in hyperten-

sion. Surgical correction of the obstruc-  
 tion may cure high blood pressure in af-  
 fected patients.



COAGULATION CASCADE

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 tion may cure high blood pressure in af-  
 fected patients.

**coarctotomy** (kô-â-rîk'tô-tô-mâ) [F + Gr.  
 tome, incision] Cutting or dividing of a  
 stricture.

**coat** [L. cutis, a tunic] A covering or a  
 layer in the wall of a tubular structure,  
 as the inner coat (tunica intima), middle  
 coat (tunica media), or outer coat (tu-  
 nica adventitia) of an artery.

**coating** (kô-â-ting) 1. A layer applied to or  
 covering a surface. 2. A film.

**Coats' disease** (kô-â-tz) [George Coats,  
 Brit. ophthalmologist, 1876-1915] The  
 development of large white masses deep  
 in the blood vessels of the retina. This  
 term is now used to describe at least six  
 separate retinal disorders.

**cobalamin** (kô-bâl'â-mîn) Another name  
 for vitamin B<sub>12</sub>, a complex molecule con-  
 taining one atom of cobalt. SEE: cyano-  
 cobalamin.

**cobalt** (kô-bâl'tic) SYMB: Co. A gray, hard,  
 ductile metallic chemical element;  
 atomic weight 58.933, atomic number  
 27, specific gravity 8.9. Cobalt deficiency  
 causes anemia in ruminants, but this  
 has not been demonstrated in humans.

Cobalt is an essential element in vita-  
 min B<sub>12</sub>. Cobalt stimulates production of  
 red blood cells, but its use as a thera-

peutic agent is not advised. In children,  
 cobalt overdose may cause death. In  
 adults, it may cause anorexia, nausea,  
 vomiting, deafness, and thyroid hyper-  
 plasia with resultant compression of the  
 trachea.

**cobalt-57** A radioactive isotope of cobalt  
 with a half-life of 272 days.

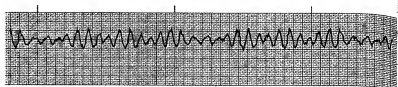
**cobalt-60** A radioactive isotope of cobalt,  
 used as a source of beta and gamma  
 rays in treating malignancies. It has a  
 half-life of 5.27 years.

**Coban** Trade name for a self-adherent  
 compression bandage used for protection  
 and edema control. Also called  
 Coban wrap.

**Cobb angle** The angle formed by the in-  
 tersection of two lines drawn on a spinal  
 radiograph of a person (usually a child  
 or adolescent) suspected of having sco-  
 liosis. One line is drawn parallel to the  
 lower surface of the lowest affected ver-  
 tebral body, and the other is drawn par-  
 allel to the upper surface of the highest  
 affected body. Angles of greater than  
 10° are diagnostic of scoliosis.

**cobra** (kô-brâ) Any one of a group of poi-  
 sonous snakes native to parts of Africa  
 and Asia. They all have the ability to  
 expand the neck into a flattened hood.

**COBS** cesarean-obtained barrier-sub-  
 stituted.



VENTRICULAR FIBRILLATION

most patients with atrial fibrillation with a rapid ventricular response, controlling the rapid heart rate alleviates symptoms. Electrical or chemical cardioversion of initial episodes of atrial fibrillation may successfully restore sinus rhythm, often for a period of several months to as long as a year. Anticoagulation (e.g., with warfarin) markedly reduces the risk of stroke and should be given for several weeks before, and about a week after, elective cardioversion, and to patients in chronic AF who do not return to sinus rhythm with treatment. Patients who elect not to use anticoagulants for chronic AF, or in whom anticoagulants pose too great a risk of bleeding, usually are given 325 mg of aspirin daily. AF can also be treated with radiofrequency catheter ablation, or with surgical techniques to isolate the source of the rhythm disturbance in the atria. SEE: *ablation*.

**PATIENT CARE:** The acutely ill patient is placed on bedrest and monitored closely, with frequent assessments of vital signs, oxygen saturation, heart rate and rhythm, and 12-lead electrocardiography. Supplemental oxygen is supplied and intravenous access established. Preparations for cardioversion (if necessary) and the medications prescribed for the patient are explained. Patients should be carefully introduced to the risks, benefits, and alternatives to stroke prevention with anticoagulation. Stroke is one of the most serious complications for patients with atrial fibrillation. The risk of embolic stroke in AF is about 5% annually without anticoagulation but lower with it. However, the use of anticoagulants increases the risk of bleeding. Aspirin may occasionally be used with or without anticoagulants. It decreases the risk of stroke in AF somewhat less effectively than anticoagulant drugs. Patients treated with anticoagulants should maintain an International Normalized Ratio (INR) in the 2.0 to 3.0 range. Regular assessment of the INR reduces the hazard of serious bleeding.

**Isolated atrial f.** Atrial fibrillation that is not caused by or associated with underlying disease of the heart muscle, heart valves, coronary arteries, pulmonary circulation, or thyroid gland. Prognosis seems better for this type of atrial fib-

illation than for that which results from anatomical or metabolic abnormalities.

**Paroxysmal atrial f.** Intermittent episodes of atrial fibrillation.

**ventricular f.** ABRB VFIB. A treatable, but lethal dysrhythmia present in nearly half of all cases of cardiac arrest. It is marked on the electrocardiogram by rapid, chaotic nonrepetitive waveforms, and clinically by the absence of effective circulation of blood (pulselessness). Rapid defibrillation (applying unsynchronized electrical shocks to the heart) is the key to treatment. Basic measures, such as opening the airway and providing rescue breaths and chest compressions, should be undertaken until the defibrillator is available. SEE: *illness, defibrillation; advanced cardiac life support*.

**fibrillin** (f'bril-in) A protein constituent of connective tissue. It is present in skin, ligaments, tendons, and in the aorta. In Marfan's syndrome, there is reduced content of microfibrils that contain fibrillin. SEE: *elastin*.

**fibrillogenesis** (f'bril'o-jen-ê-sis) Formation of fibrils.

**fibrin** (f'brin) (L. *fibra*, fiber) A whitish, filamentous protein formed by the action of thrombin on fibrinogen. The conversion of fibrinogen to fibrin is the third and final stage of blood clotting. The fibrin is deposited as fine interlacing filaments which entangle red and white blood cells and platelets, the whole forming a coagulum, or clot. SEE: *coagulation, blood, fibrinous, scab*.

**fibrin-fibrinogen degradation products** A group of soluble protein fragments produced by the proteolytic action of plasmin on fibrin or fibrinogen. These products impair the hemostatic process and are a major cause of hemorrhage in intravascular coagulation and fibrinolysis.

**fibrin glue** Fibrinogen concentrate combined with bovine thrombin. It may be applied topically to stop bleeding, e.g., during surgery. It also may be injected into a variety of fistulae with some degree of success. Autologous fibrinogen (as cryoprecipitate) mixed with calcium chloride and bovine thrombin will result in fibrin glue. Commercially available is fibrin sealant composed of human plasma and bovine-derived components.